



GEO Task DI-06-09 Use of Satellites for Risk Management

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Approach



- Creation of DI-06-09 Steering Committee: CSA, UNOOSA, CEOS, ESA, UNOSAT, IGOS, WMO, Geo Secretariat
- Steering Committee has created two sub-groups:
 - User Working Group (David Stevens, UNOOSA): will compile list of available documents for roll-up into user requirements report, and draft user report
 - Architecture Working Group (Guy Seguin, CSA): will examine preliminary user report, propose specific architectures to meet needs and draft a timeline for implementation
- DI-06-09 Steering Committee will draft recommendations for implementation based on reports of each sub-group.

Output and Deliverables



- By fall 2007, the group aims to deliver:
 - User report: compilation of user requirements for disaster management using satellites
 - Architecture Report: satellite system definition
 - Recommendations for implementation
 - A demo of how the virtual constellation might work

User Group 13 June



- About 30 participants
- Diverse geographical representation every continent
- Diverse organizations: meteorological organizations, civil security, international users, national government representatives, space agencies
- Strong support expressed for GEO Task, seen as complement to UN SPIDER
- Willingness to continue supporting task development, including on-going review of requirements from user perspective

User Group 13 June



- Users agreed on format for presentation of user requirements by disaster phase, and subsequent roll-up for "generic" requirement (see tables in following slides)
- Strong feeling that vulnerabilities assessment/risk mapping needs to be initial focus of Task requirements analysis
- Charter excellent first step towards operational response, but serious issues raised: access/non-member activation, data vs information, timeliness, asset availability
- Problem of data integration into products and services not resolved
- Need to address capacity building and data policy issues

User Requirement roll-up



Evample - M						Special Country Change detection				
Disaster	Purpose	Attributes	type	to other data	Geo. coverage	resolution		Γ sk ng	Latency	Change detection
Floods	Identify flood risk zones	Topograph y, historical flood extent	Radar Medium res spectro Medium res multi	Accurate DEMs – 10m? Cities 1m? 20cm?	Major flood plains (cities)	100m – 250m (some zones at 10m)	Not critical	Not critical	Not critical	no
Wind-storms										
Tsunamis										
Earth- quakes										
Landlsides										
Volcanos										
Fires										
Drought										
Insects										



Architecture Group 18 June

- Address architecture phase by phase...
- For Mitigation/Warning/Recovery, use pilot project approach with selection of regional champions that can integrate satellite data to showcase usefulness of monitoring activities; organize volunteer contributions on mission-by-mission basis; define global "baseline" imaging scenario
- For Response, broaden Charter by inviting GEO Member states to designate authorized users (if agreed to by Charter); encourage new Charter membership

CEOS Implementation Plan Target Linkages



- Strengthen the Charter (2007): recommendation to seek Charter permission to allow GEO member states to become Authorized Users to activate the Charter; encourage new Charter membership
- Facilitate existing monitoring by geostationary satellites (2007): being addressed by both user and architecture reports
- Establish continuity of critical observations (2011): user report will address critical gaps and architecture will address ongoing operational needs
- Integrated system of GPS and INSAR (2011-15): architecture report will identify necessary capacity and requirement will be documented
- Establish automated satellite data processing systems for rapid hazard detection (2011-15): will be addressed on pilot basis in context of regional demonstration projects